#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 1.28

# WELDING INSPECTION REPORT

Resident Engineer: Casey, William **Report No:** WIR-028271 Address: 333 Burma Road **Date Inspected:** 24-Aug-2012

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1930 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Job site

**CWI Name:** Salvador Merino **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

## **Summary of Items Observed:**

Quality Assurance Inspector (QAI) Rodney Patterson was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

## Magnetic Particle Testing (OBG 13E)

This QA Inspector performed a minimum of 15% verification Magnetic Particle Testing (MT) of the deck panel drop-in splice weld connection designated as 13E-E2.8. This QA Inspector generated a TL-6028 MT report on this date. The results of the inspection are as follows;

Deck Drop-in Longitudinal Splice (Weld 13E-E2.8 Face B)

No indications found at the time of inspection.

The QAI observed ABF/JV qualified welder Wai Kitlai #2953 performing Carbon Arc Gouging (CAG) for the repair of the longitudinal rib stiffener to K-plate extension web connection. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavations at the following locations,

Y=230 Depth 13, Width 20mm, Length 100mm

Y=500 Depth 15, Width 20mm, Length 150mm

The ABF welder Wai Kitlai was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in

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the 2G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair at the locations previously noted. The weld and surrounding area was brought to a temperature of 325°F by the use of a gas torch and maintained throughout the welding process. Due to the first time repair at these locations approval of the engineer is not required.

## Ultrasonic Testing (OBG 13E)

This QA performed verification Ultrasonic Testing (UT) on Complete Joint Penetration (CJP) deck panel drop-in flange connection for lift 13W. The weld was previously tested and accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QAI's findings are as follows;

## Lift 13W Panel Point 122.5 Flange Splice (Weld No. 13W-PP122.5-W2.5-BF2)

The QAI performed a 100% verification of this weld. A total of one (1) rejectable indication was observed by the QAI at the time of inspection. The indications discovered by the QAI were confirmed by ABF QC inspector Scott Kortum during the shift.

## OBG 13E Deck Drop-in (13E-PP122.2)

This QAI observed ABF/JV QC inspector Jesse Cayabyab performing Ultrasonic Testing (UT) of the deck panel drop-in transverse weld splice designated as 13E-E122.2. The weld was being re-inspected ultrasonically after being rejected by the QAI for multiple missed indications on 08-22-2012. The ABF/JV QC inspector discovered a large number of rejectable indications from  $Y=0\sim Y=3000$  as seen in the attached photograph.

The QAI spent a portion of this shift reviewing and documenting the status and completion of various production welding tracking logs for lift 13E-14E drop-in deck work currently in-process. The QA recorded the information on the OBG tracking log.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

As noted above





#### **Comments**

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Patterson, Rodney	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer